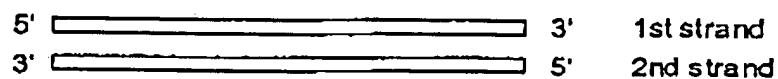


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MOLECULES
Inventor: Klaus GIESE
Filed: August 5, 2003

Fig. 1



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Fig. 2

Fig. 2A

- groups of modified nucleotides
- groups of unmodified nucleotides

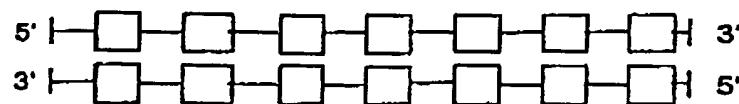


Fig. 2B

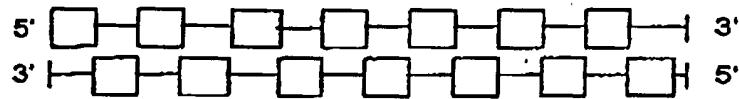
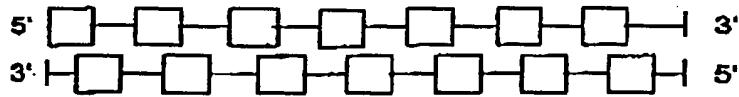


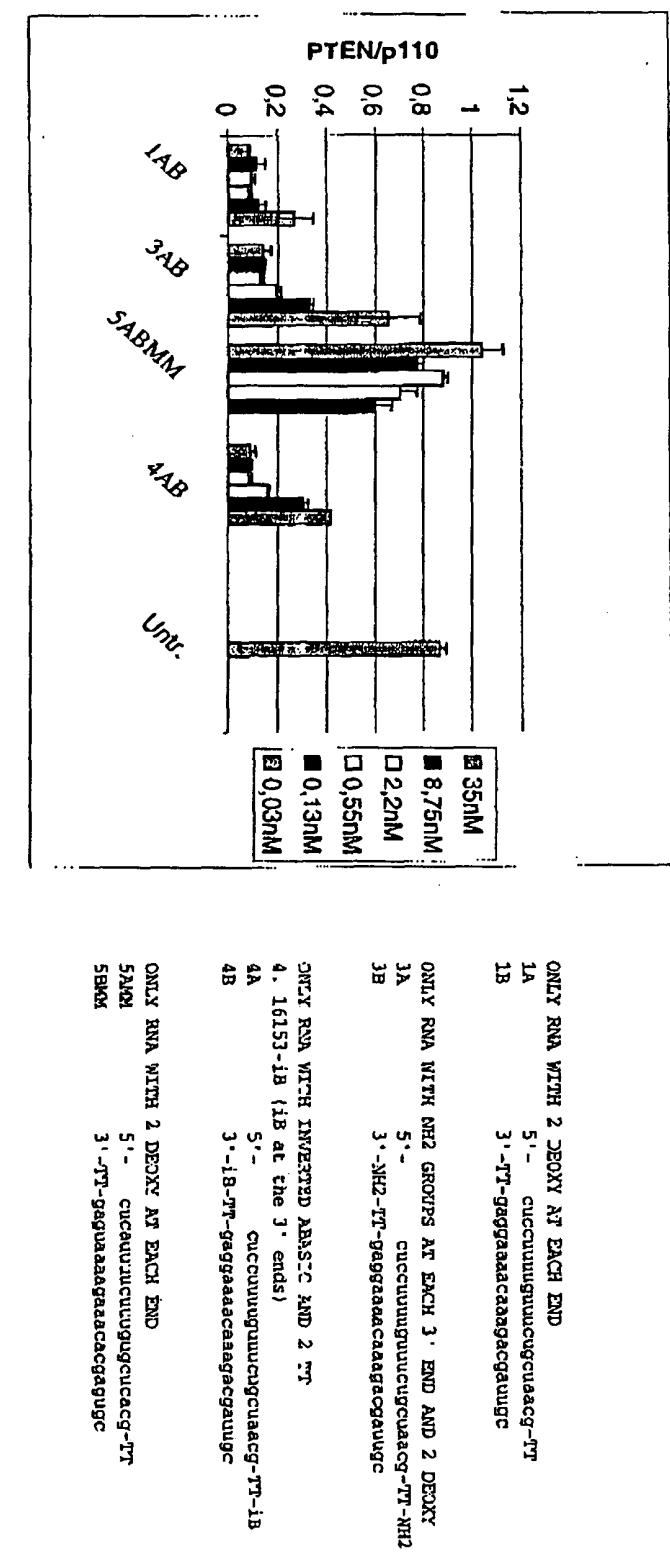
Fig. 2C



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Fig.3

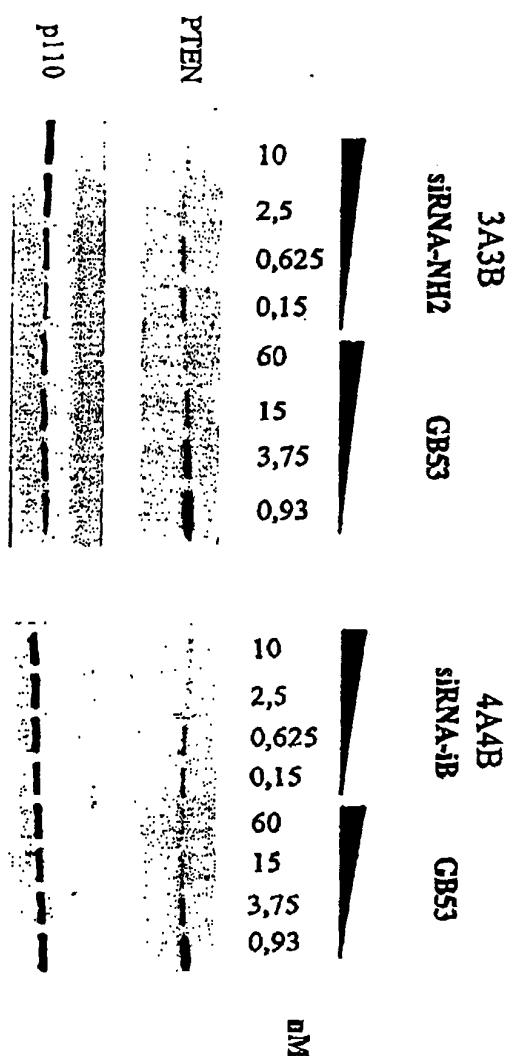


3A

3B

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Fig. 3C



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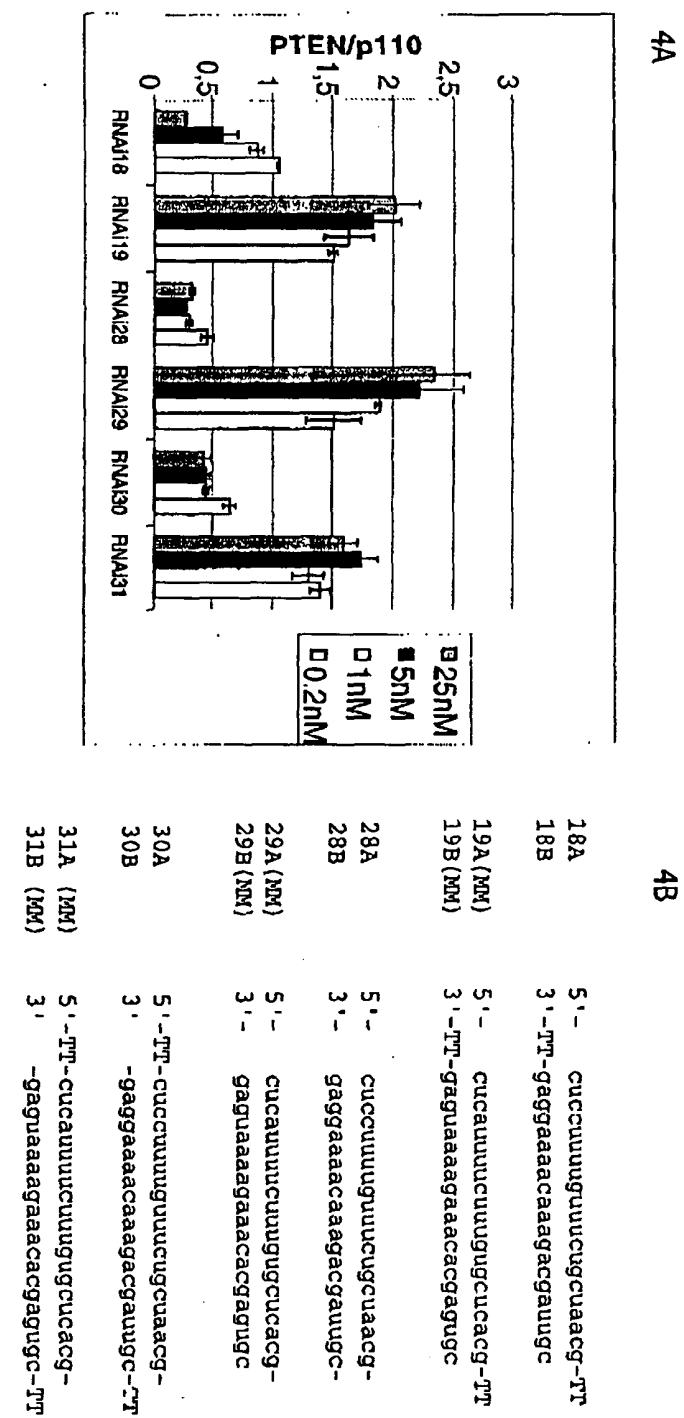
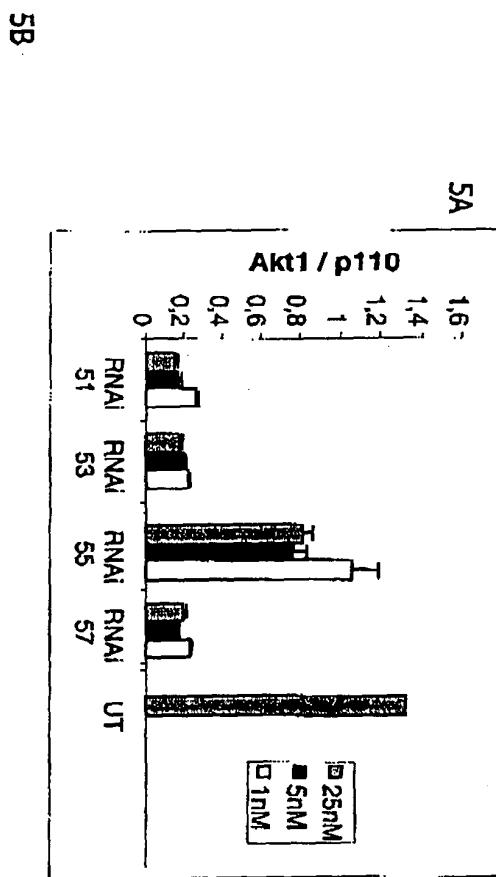


Fig. 4

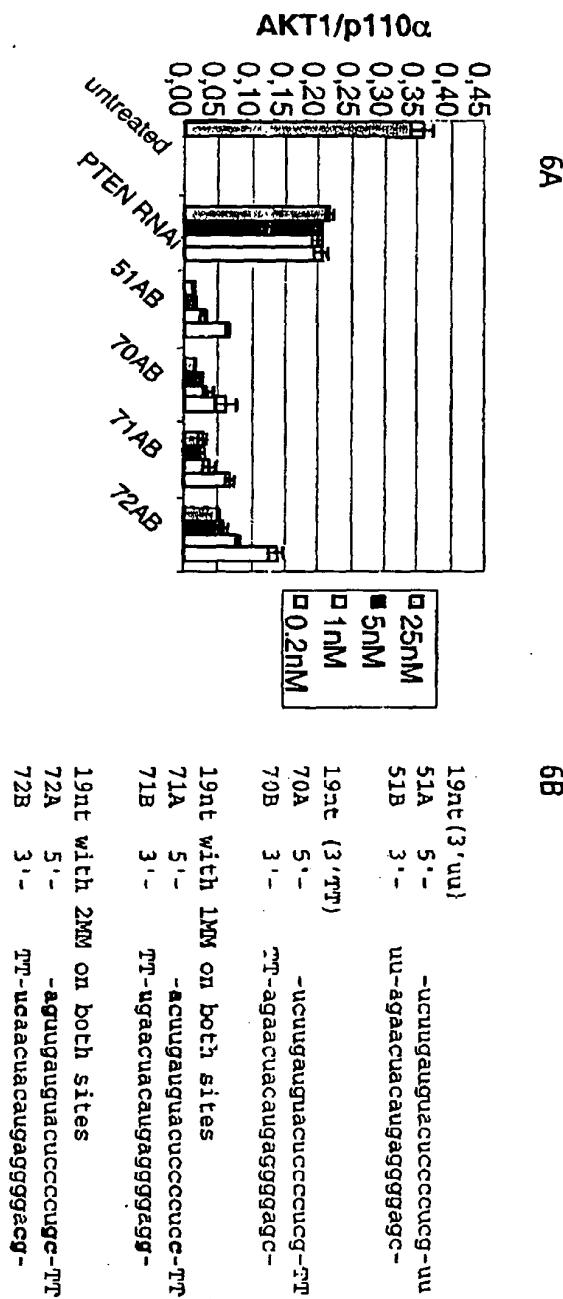
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Fig. 5



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 Filed: August 5, 2003

Fig. 6



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 Filed: August 5, 2003

A

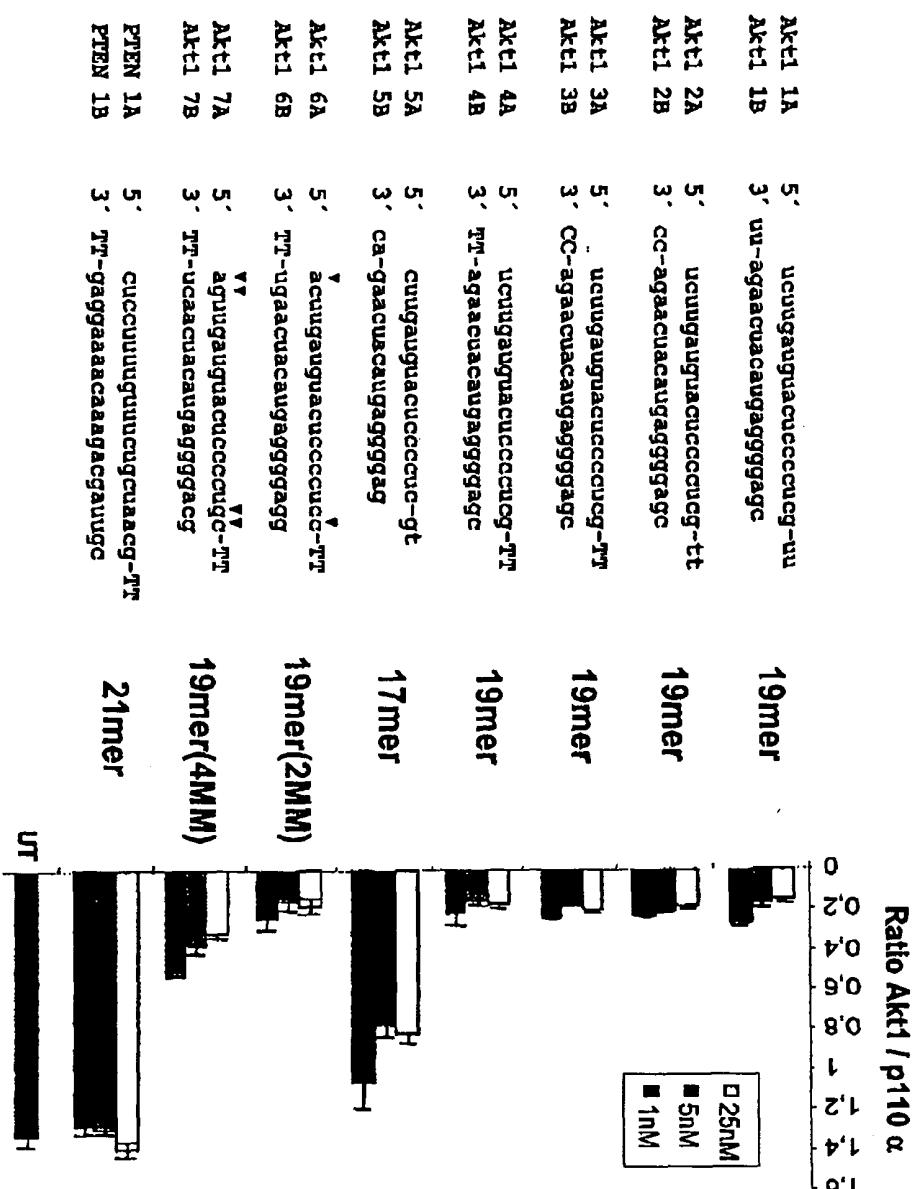


Fig. 7

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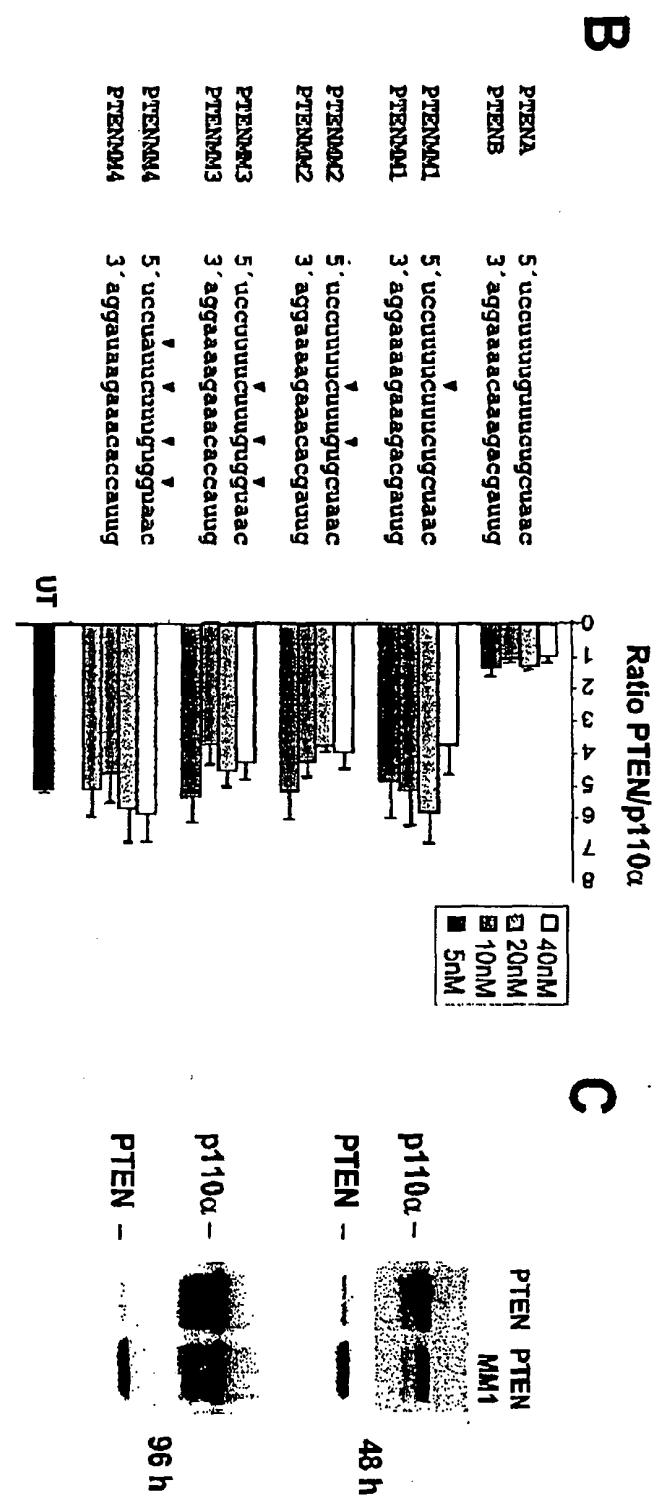
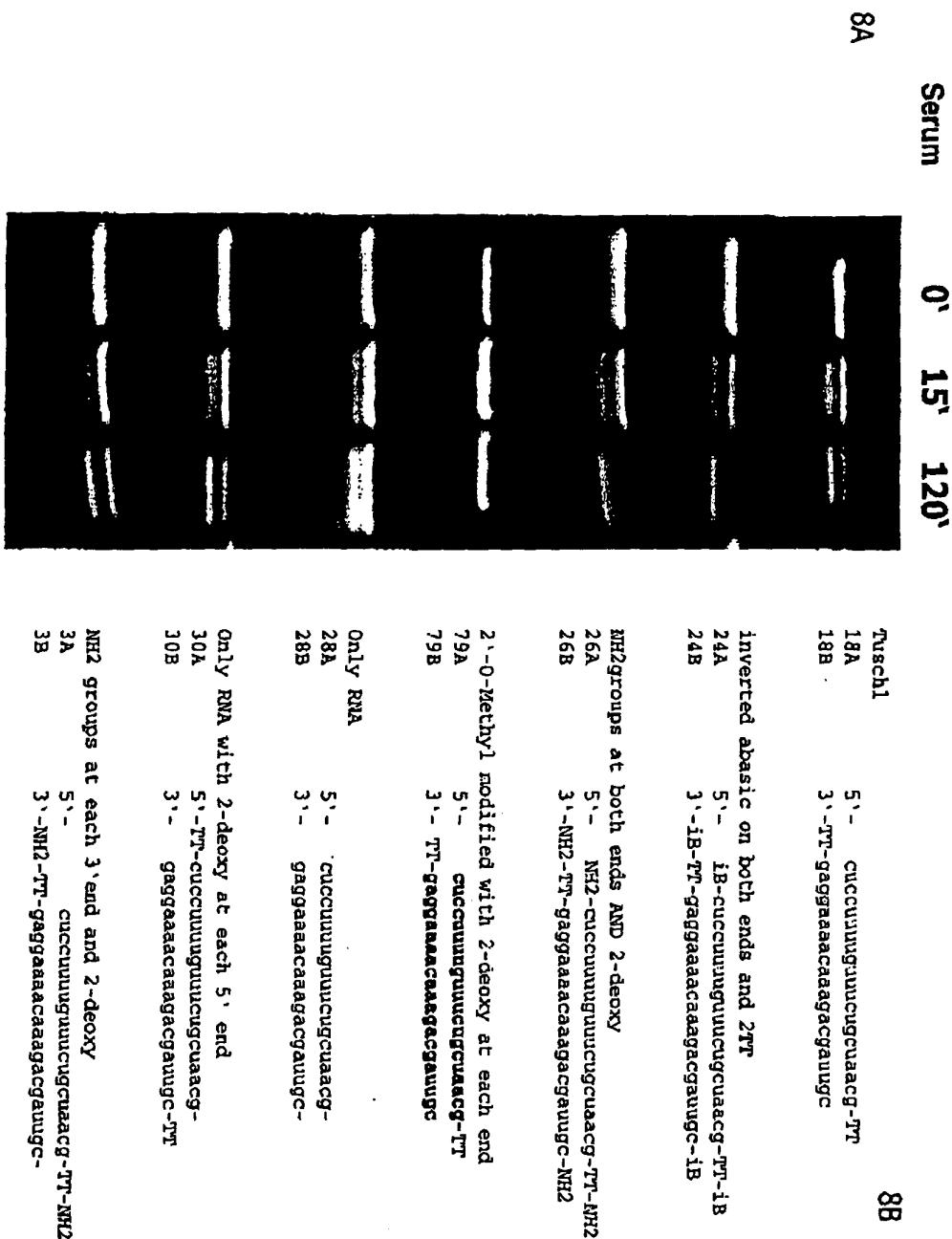


Fig. 7

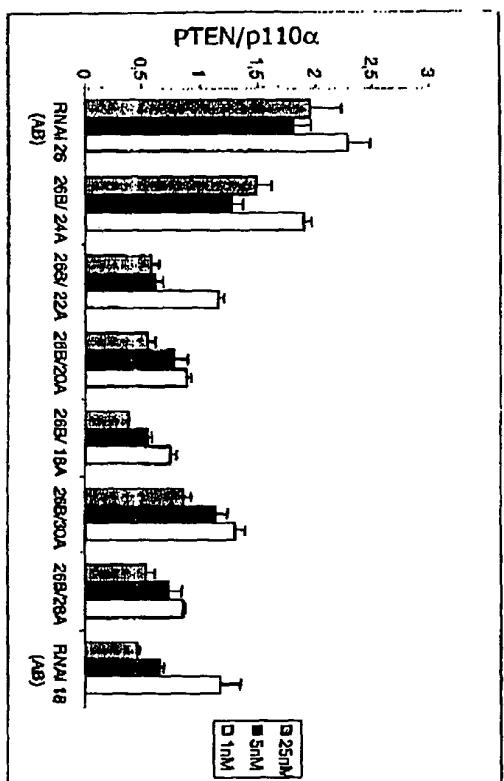
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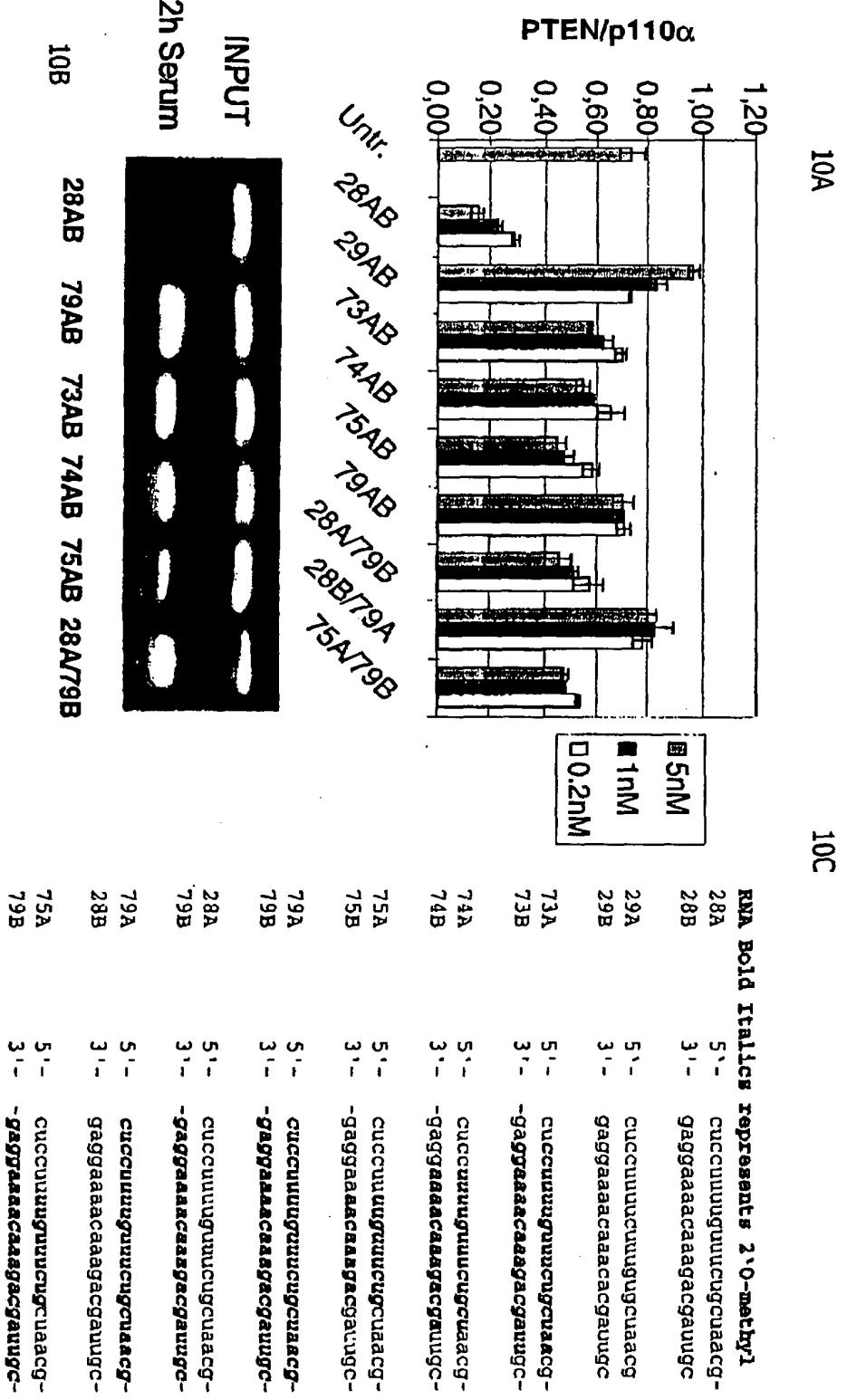
Fig.
6



6

9C	-monomer	28A 26B	5' - 3' -NH2-TT-gaggaaacaagacgauugc-NH2
NH2-annnnnnnnnnnnnn-NH2	functional		
-nnnnnnnnnnnnnn-n-NH2			
NH2-annnnnnnnnnnn-n-NH2	functional	18A 18B	5' - 3' - cucuuuuguuucuguaacg-TT TT-gagaaaacaagacgauugc
NH2-annnnnnnnnnnn-n-NH2	not functional		
G-annnnnnnnnnnn-n-t			

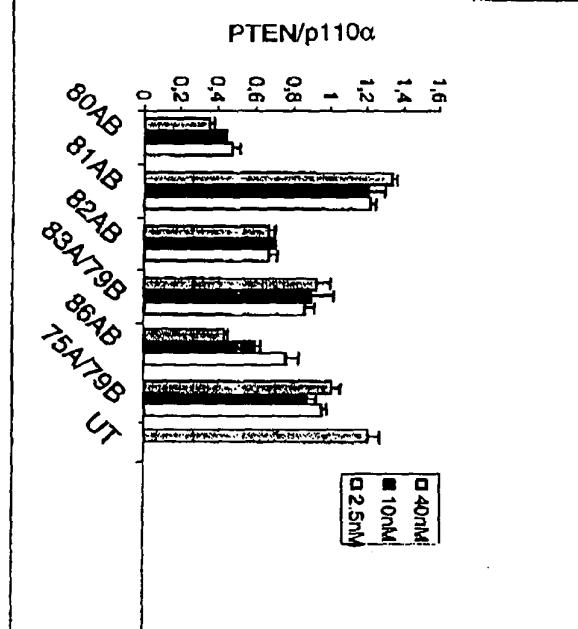
Fig. 10



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Fig. 11

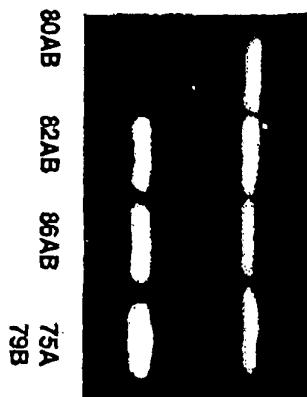
11A



11C

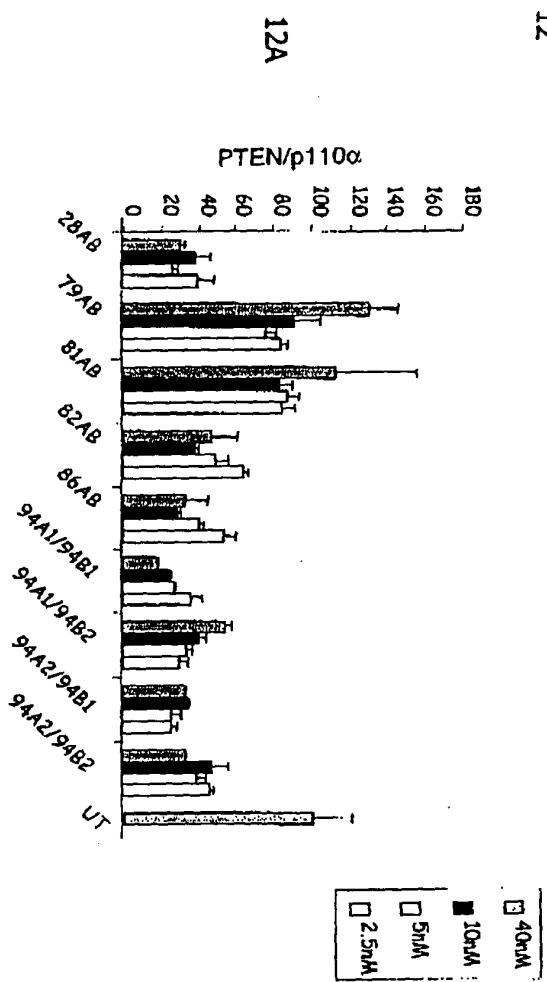
RNA	Bold Italics represents 2'-O-methyl
80A	5' - cuccuuuuguuuucugcuaacg-
80B	3' - -gaggaaaacaagacgauugc-
81A	5' - cuccuuuuguuuucugcuaacg-
81B	3' - -gaggaaaacaagacgauugc-
82A	5' - cuccuuuuguuuucugcuaacg-
82B	3' - -gaggaaaacaagacgauugc-
83A	5' - cuccuuuuguuuucugcuaacg-
79B	3' - -gaggaaaacaagacgauugc-
86A	5' - cuccuuuuguuuucugcuaacg-
86B	3' - -gaggaaaacaagacgauugc-
75A	5' - cuccuuuuguuuucugcuaacg-
79B	3' - -gaggaaaacaagacgauugc-

11B INPUT



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Fig. 12

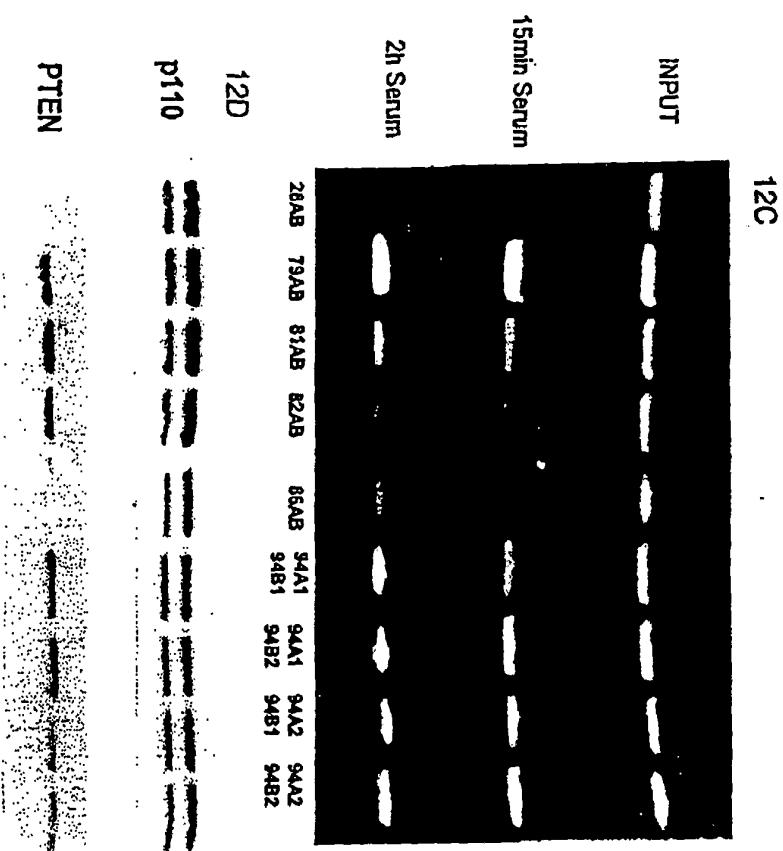


RNA Bold Italics represents 2'-O-methyl

28A	5'- c <u>uccuuu</u> u <u>uucugcuacg</u> -	86A	5'- c <u>uccuuu</u> u <u>uucugcuacg</u> -
28B	3'- g <u>aggaa</u> ac <u>aaagacgau</u> gc-	86B	3'- g <u>aggaa</u> ac <u>aaagacgau</u> gc-
79A	5'- c <u>uccuuu</u> u <u>uucugcuacg</u> -	94A1	5'- c <u>uccuuu</u> u <u>uucugcuacg</u> -
79B	3'- <i>gaggaa</i> ac <u>aaagacgau</u> gc-	94B1	3'- <i>gaggaa</i> ac <u>aaagacgau</u> gc-
81A	5'- c <u>uccuuu</u> u <u>uucugcuacg</u> -	94A2	5'- c <u>uccuuu</u> u <u>uucugcuacg</u> -
81B	3'- g <u>aggaa</u> ac <u>aaagacgau</u> gc-	94B2	3'- g <u>aggaa</u> ac <u>aaagacgau</u> gc-
82A	5'- c <u>uccuuu</u> u <u>uucugcuacg</u> -	94A2	5'- c <u>uccuuu</u> u <u>uucugcuacg</u> -
82B	3'- <i>gaggaa</i> ac <u>aaagacgau</u> gc-	94B1	3'- g <u>aggaa</u> ac <u>aaagacgau</u> gc-
		94A2	5'- c <u>uccuuu</u> u <u>uucugcuacg</u> -
		94B2	3'- g <u>aggaa</u> ac <u>aaagacgau</u> gc

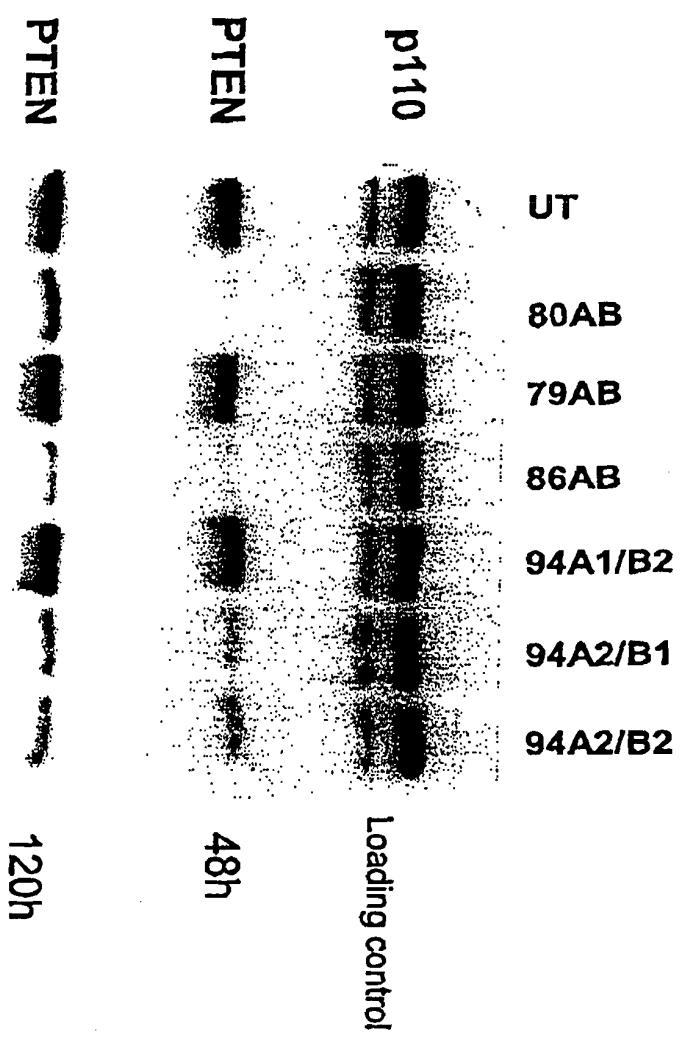
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Fig. 12



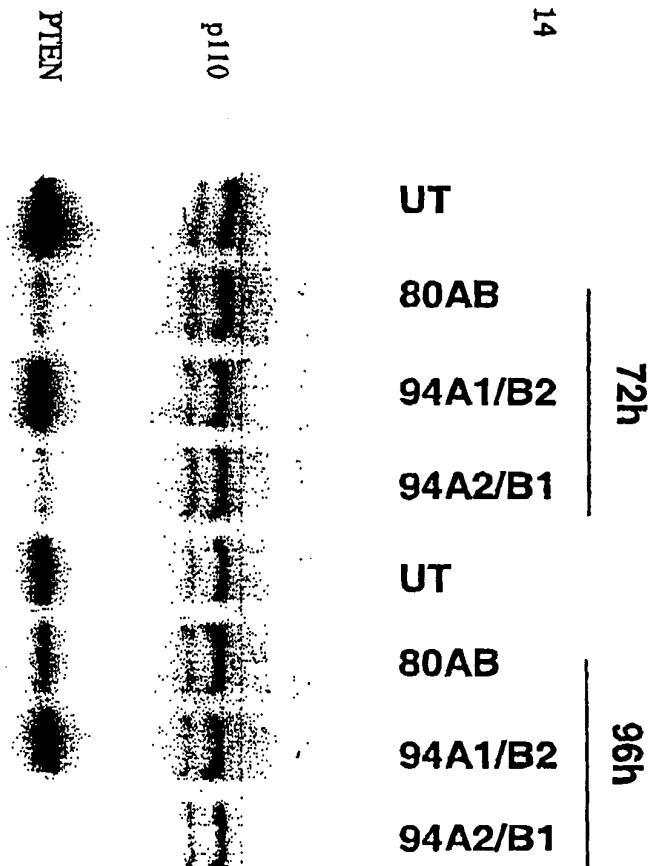
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Fig. 13



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Fig. 14



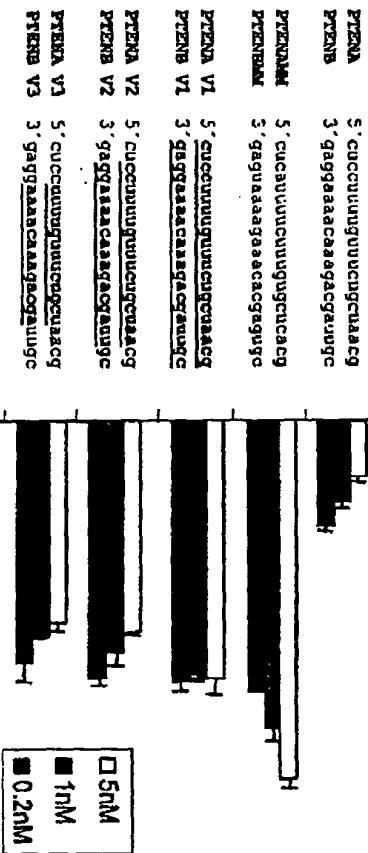
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Inventor: Klaus GIESE
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Ratio PTEN/p110 α

A

UT



PTEN V1 5' cuccuuuuuuuuuucuuacg
 PTEN V2 3' gagggaaacaaacggacuacg
 PTEN V3 5' cucauuuuuuuugcucatcg
 PTEN V4 3' gagggaaacaaacggacuacg
 PTEN V5 5' cuccuuuuuugcucacg
 PTEN V6 3' gagggaaacaaacggacuacg
 PTEN V7 5' cuccuuuuuugcucacg
 PTEN V8 3' gagggaaacaaacggacuacg
 PTEN V9 5' cuccuuuuuugcucacg
 PTEN V10 3' gagggaaacaaacggacuacg
 PTEN V11 5' cuccuuuuuugcucacg
 PTEN V12 3' gagggaaacaaacggacuacg

Fig. 15

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2

5' cuccuuuuguuucugcuuaccc
3' gagggaaaccaaggacgauugcc

Filed

PTENA VI 5' cuccuucuucuucuucuucuaccc
PTEN VI 3' ggggaaaaacaaacaaacaaaa

PZEV V7 **PTENB** V7 5'-cuccauuuuuucuugcuaccg

PIENA VB 5' CUCUUNUUUCUUCC

PTENB V8 3'-ggggaaaaaaggccauuuc

卷之三

PTENB V12 3' gagggaaacaaagaccyauugg

Q

Western blot analysis of p110 α and PTEN expression in UT, AB, V1, V7, V8, V10, V13, V14, V15, and V12 cells. The blot shows bands for p110 α and PTEN across the different cell lines. The PTEN bands are very faint, suggesting low expression levels.

2h Serum

A high-contrast, black and white image showing a series of vertical, elongated, white, rectangular shapes arranged in a grid-like pattern. The shapes are slightly irregular and appear to be cutouts or holes in a dark background. The overall effect is abstract and geometric.

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A

Akt1a V1	5'ucuunquauguaucuccucq-TT
Akt1b V1	3'-TT-agaacuacauqaggggagc
Akt1a V2	5'ucuugauquacuacucccccg
Akt1b V2	3'-agaacuacauqggggggc
Akt1a V3	5'ucuugauquacuacucccccg
Akt1b V3	3'-agaacuacauqggggggc
Akt1a V4	5'ucuugauquacuacucccccg
Akt1b V4	3'-agaacuacauqggggggc
Akt1a V5	5'ucuugauquacuacucccccg
Akt1b V5	3'-agaacuacauqggggggc
Akt1a V6	5'ucuugauquacuacucccccg
Akt1b V6	3'-agaacuacauqggggggc

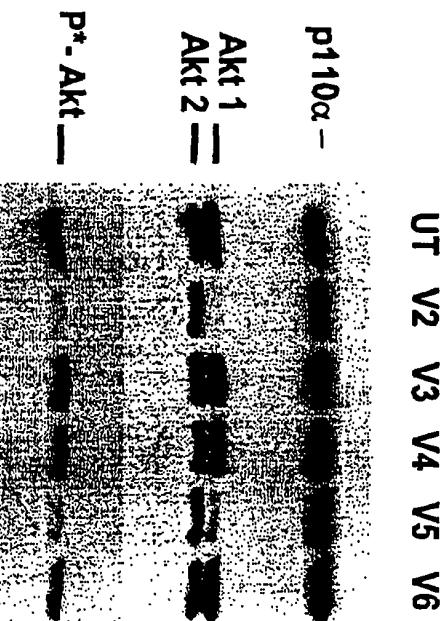


Fig. 16

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C

p110 β V2
p110 β V3
p110 β V4
p110 β V5
p110 β V6

5' aaucccaggugucaucc
3' uuaggucaccaaugg

UT V2 V3 V4 V5 V6

p110 β V3

5' aaucccaggugucaucc
3' uuaggucaccaaugg

p110 β V5

5' aaucccaggugucaucc
3' uuaggucaccaaugg

p110 β V6

5' aaucccaggugucaucc
3' uuaggucaccaaugg

p110 β V3
p110 β V4
p110 β V5
p110 β V6

p110 α -

P⁺-Akt -

Fig. 16

Fig.17

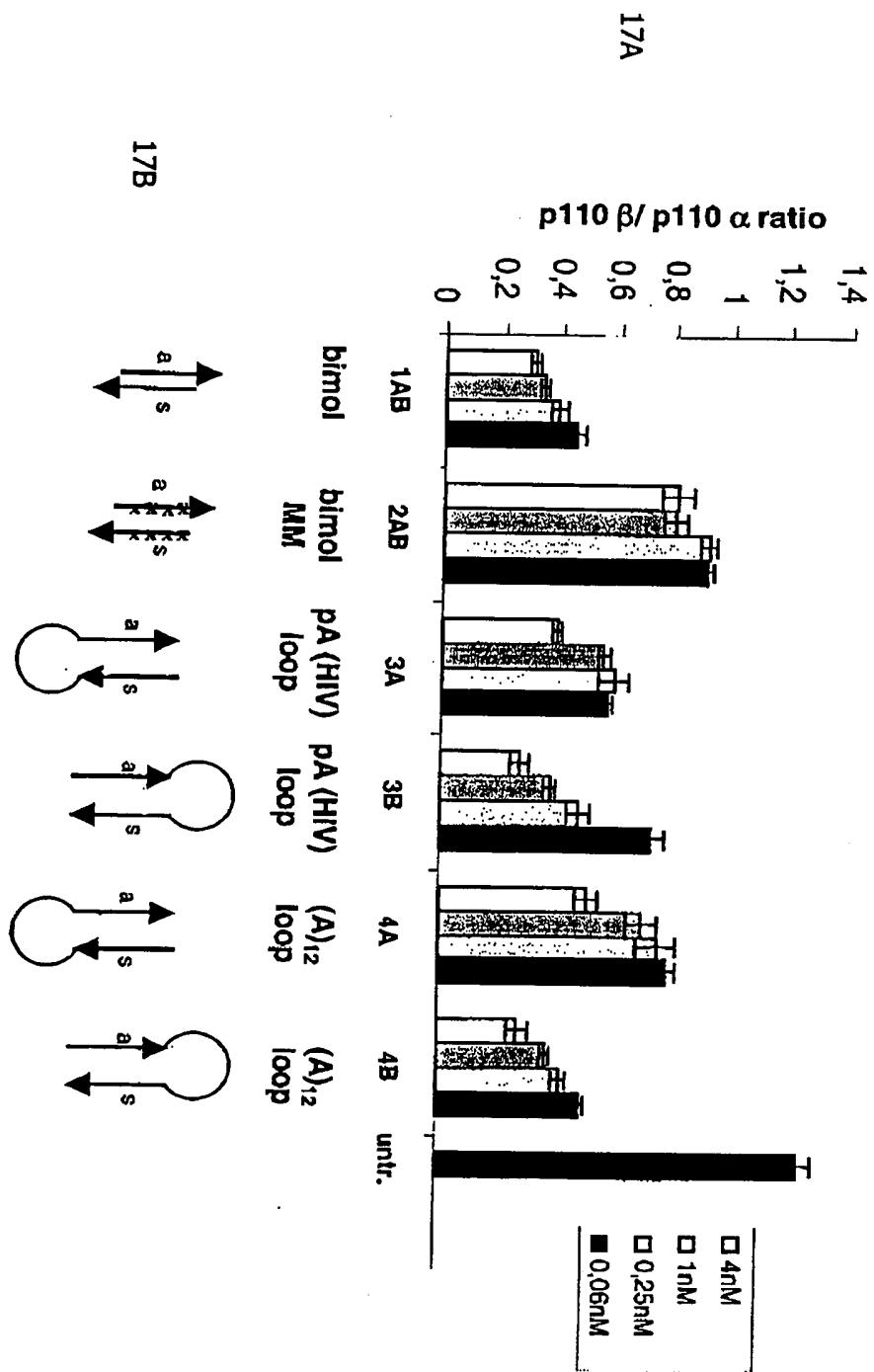
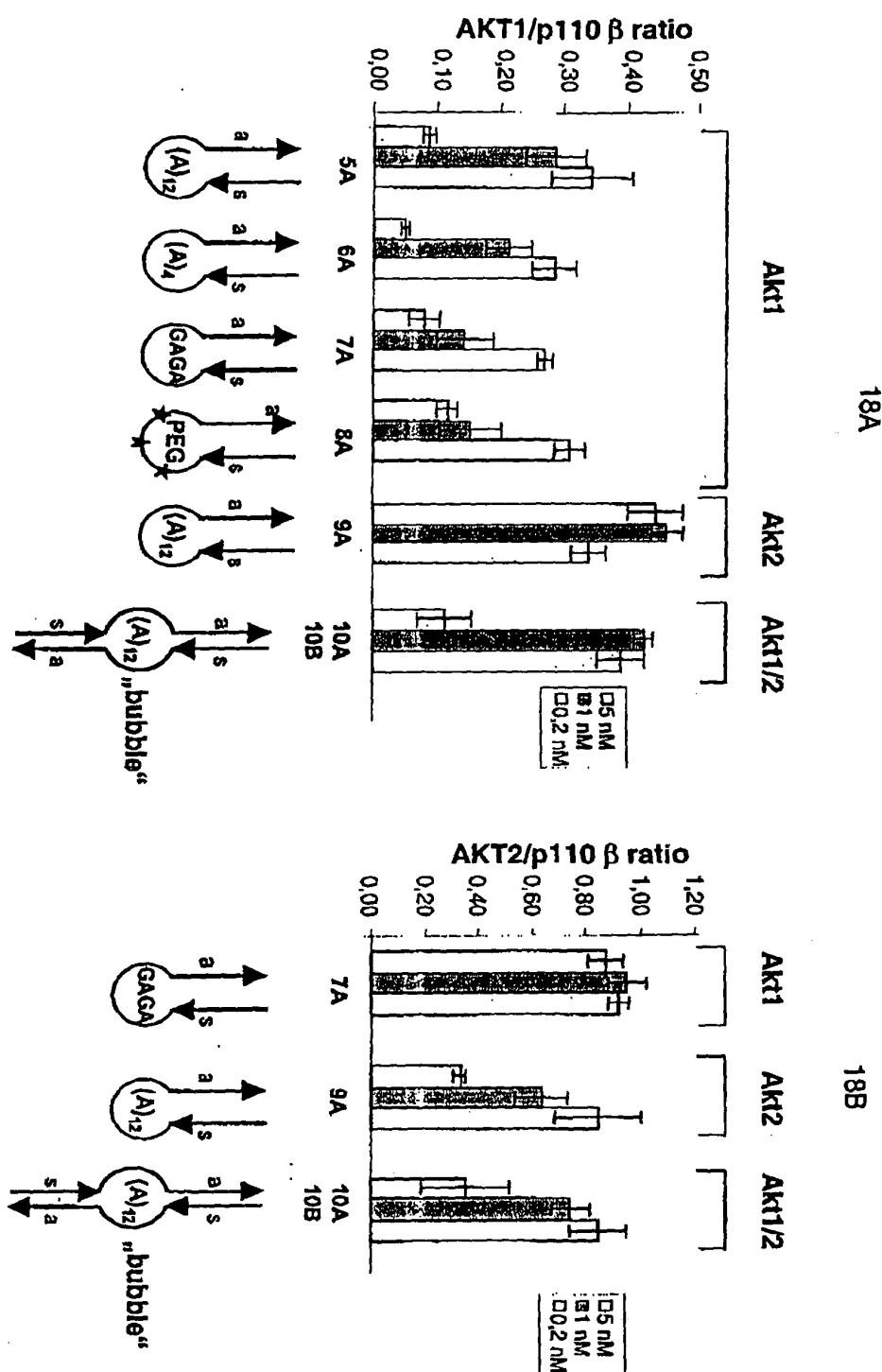


Fig. 18



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18C

untreated
5A 6A 7A 8A 9A 10A 10A 10B
10B

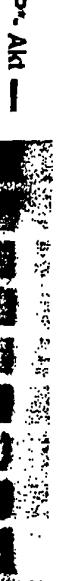
p110 α —



Akt 1 —



Akt 2 —



1 2 3 4 5 6 7 8 9

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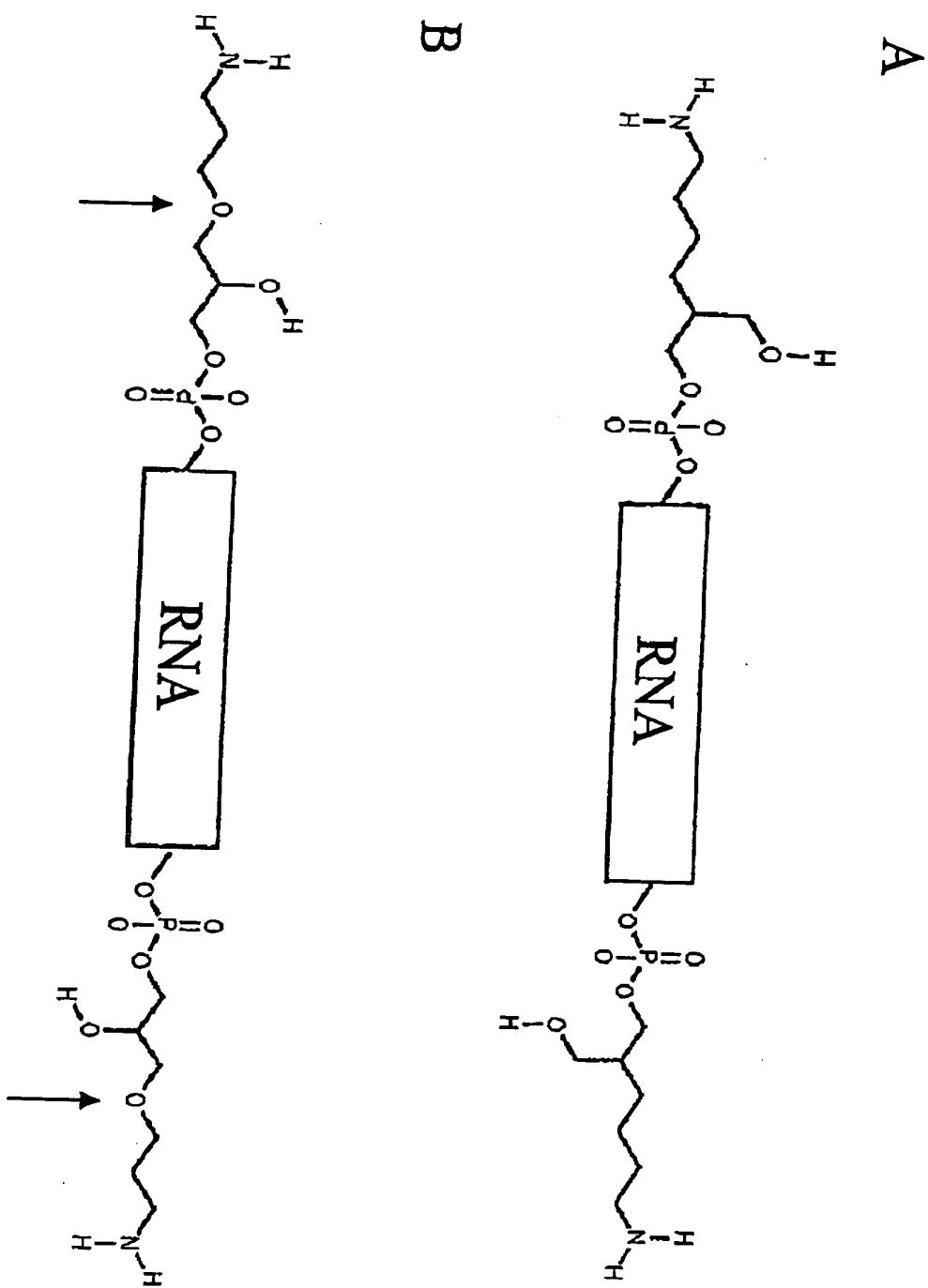


Fig. 19